



# Accountability 2.0

## The Colorado Growth Model

Montana Assessment Conference  
January 2010

Colorado Department of Education

# Growth is about change

When you're through changing, you're through.

-Benjamin Franklin

# What Business Are We In?

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- Maximize student progress toward postsecondary and workforce readiness (not meeting artificial goals, attainable or otherwise)

Implies new bright line: **all kids ready by exit**

- Requires a definition of readiness, and the standards that must be met along the way
- Requires measurement system that determines how well we are delivering on this goal

# Why is data visualization important in communication?

- Vision represents 30 percent of the cortex's neurons, as compared with 8 percent for touch and 3 percent for hearing - we acquire more info by vision than by all other senses combined!
- Visual pattern recognition is fast and parallel in the brain
- Vast amounts of data can be directly apprehended when plotting is done well

# Changing Conversations

- A new statewide conversation about change needed to support action
- Support of all key stakeholder groups

The screenshot shows the Schoolview website, a platform for educational data and communication. The header features the 'The Colorado Department of Education cde' logo and the 'SCHOOLview™' title. A navigation bar includes links for 'GROWTH MODEL', 'SCHOOL PERFORMANCE', 'LEARNING CENTER', 'COMMUNITY FEEDBACK', and 'HOME'. Below this, a banner reads 'Changing conversations about school performance and educational resources across Colorado'. The main content area is divided into four columns: 'colorado growth model' with a cluster of orange circles, 'school performance' with a photo of a student reading, 'learning center' with a video player showing a bar chart, and 'community feedback' with a photo of two women. Each column has a brief description of its function. The footer contains links for 'CONTACT US', 'EDUCATOR ACCESS', and 'SCHOOLVIEW OPPORTUNITIES', along with the 'cde Colorado Department of Education' logo.

The Colorado Department of Education cde

## SCHOOLview™

• GROWTH MODEL • SCHOOL PERFORMANCE • LEARNING CENTER • COMMUNITY FEEDBACK • HOME

*Changing conversations* about school performance and educational resources across Colorado

colorado growth model



See how Colorado schools and districts are progressing from year to year.

school performance



See the performance of individual schools, districts and the state.

learning center



Learn about Schoolview features and explore other video and text resources.

community feedback



Communicate with others through surveys, discussion groups & interactive media.

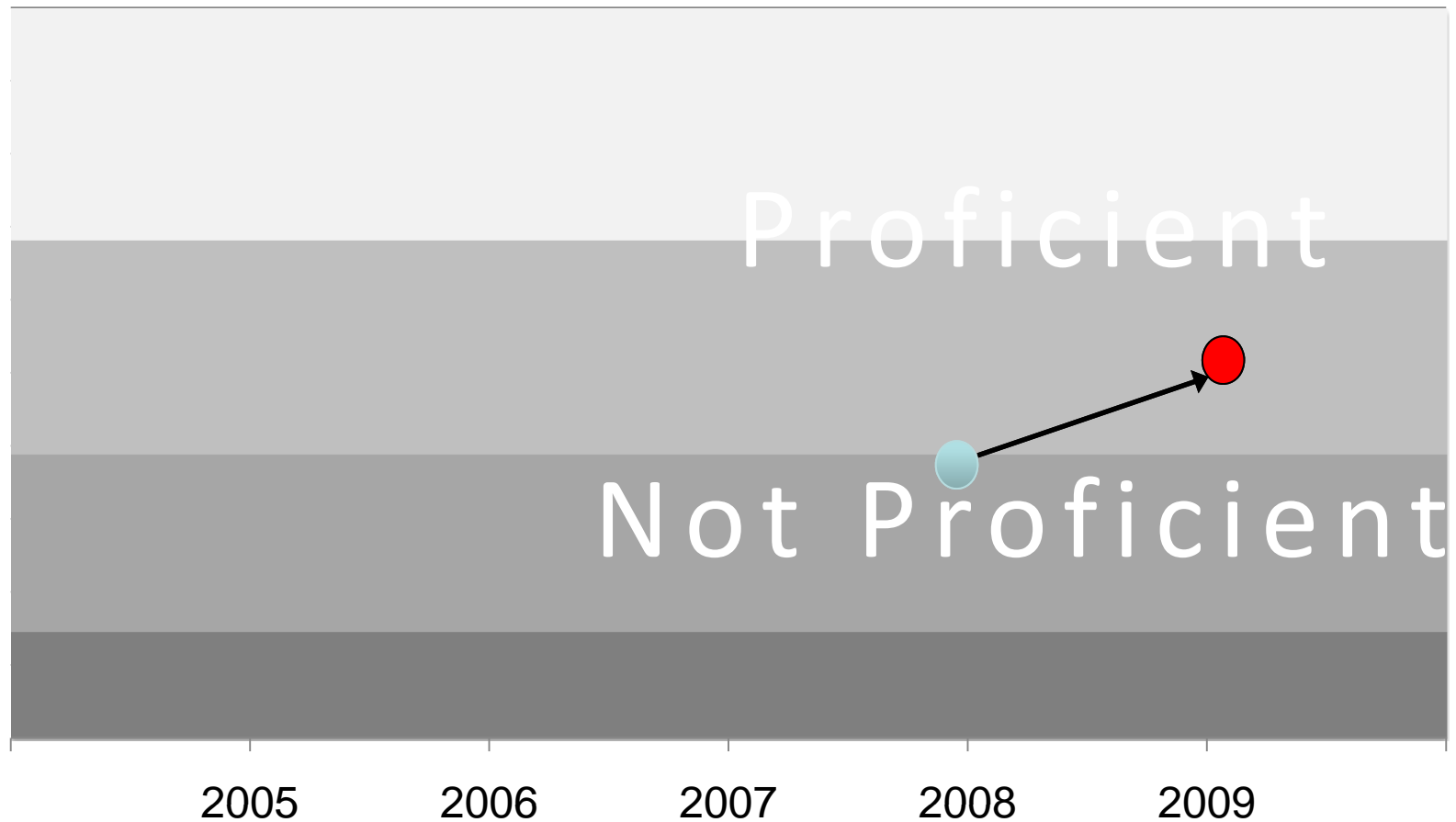
CONTACT US • EDUCATOR ACCESS • SCHOOLVIEW OPPORTUNITIES

cde Colorado Department of Education

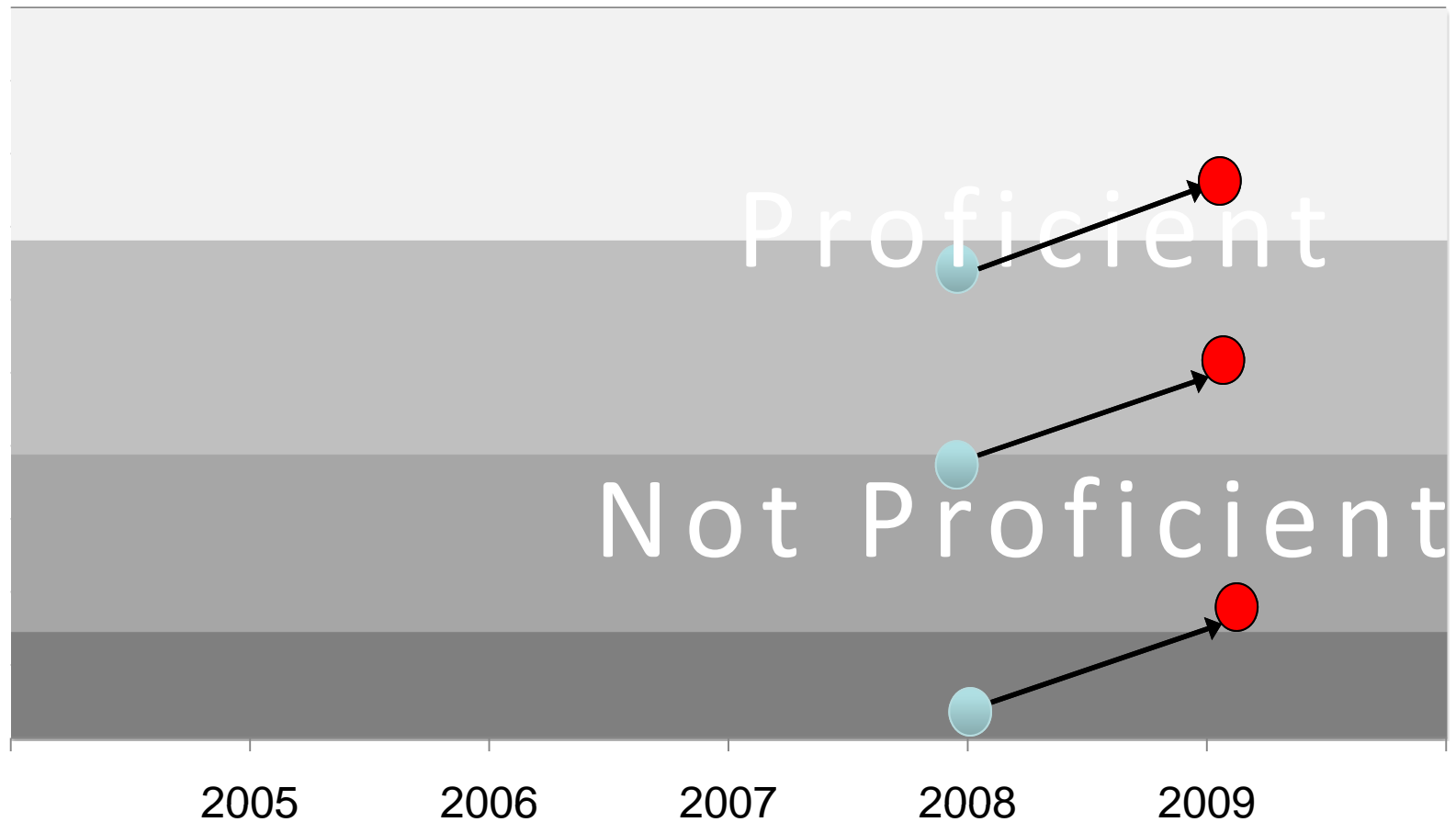
# The Colorado Growth Model

1. What is the Colorado Growth Model and how is it different from other growth models?
2. How are student growth percentiles interpreted?
3. How are the data displayed and made available to stakeholders?
4. How can a normative growth model support criterion-referenced interpretations?

# Student growth percentile interpretations

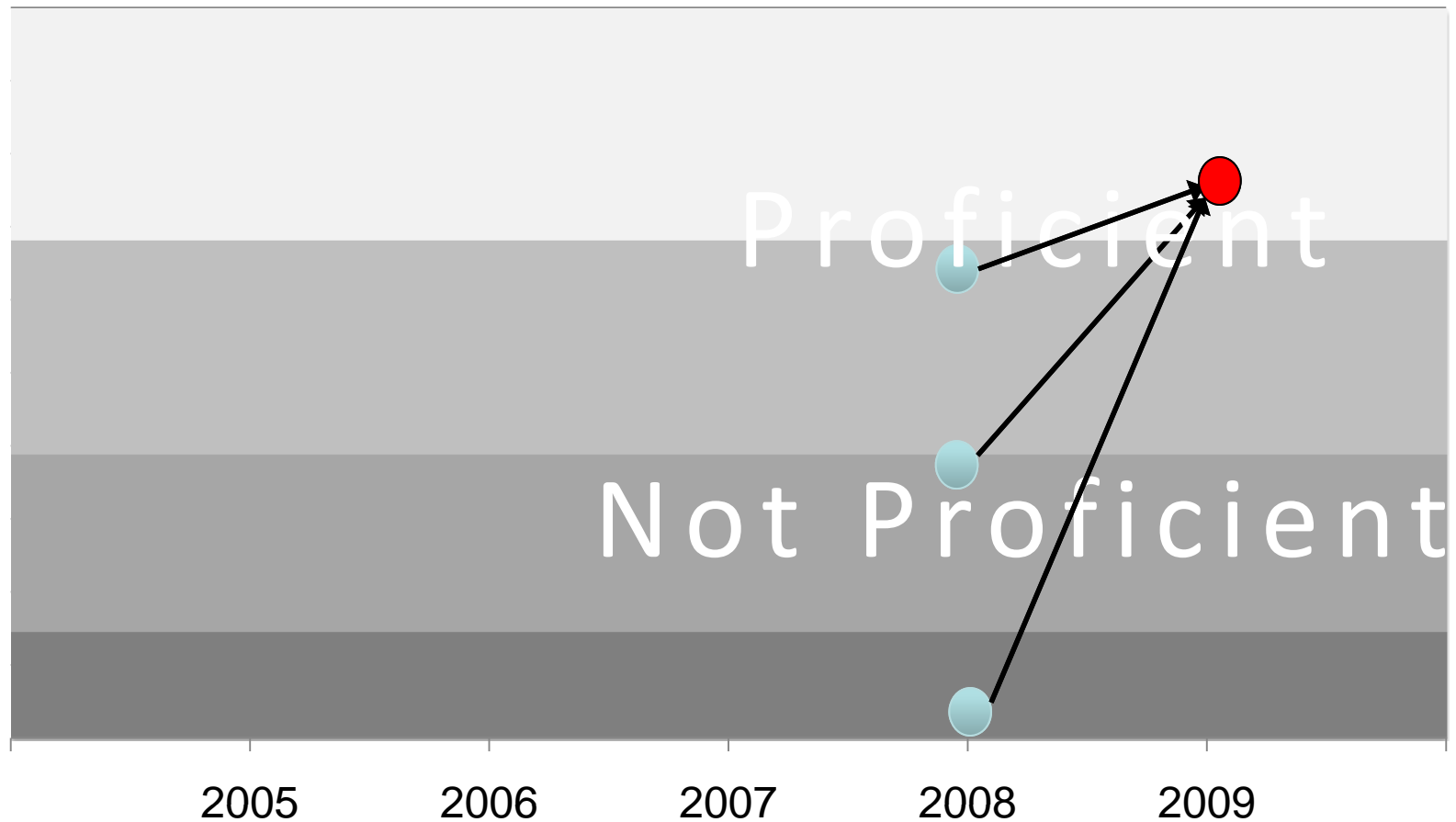


# Student growth percentile interpretations

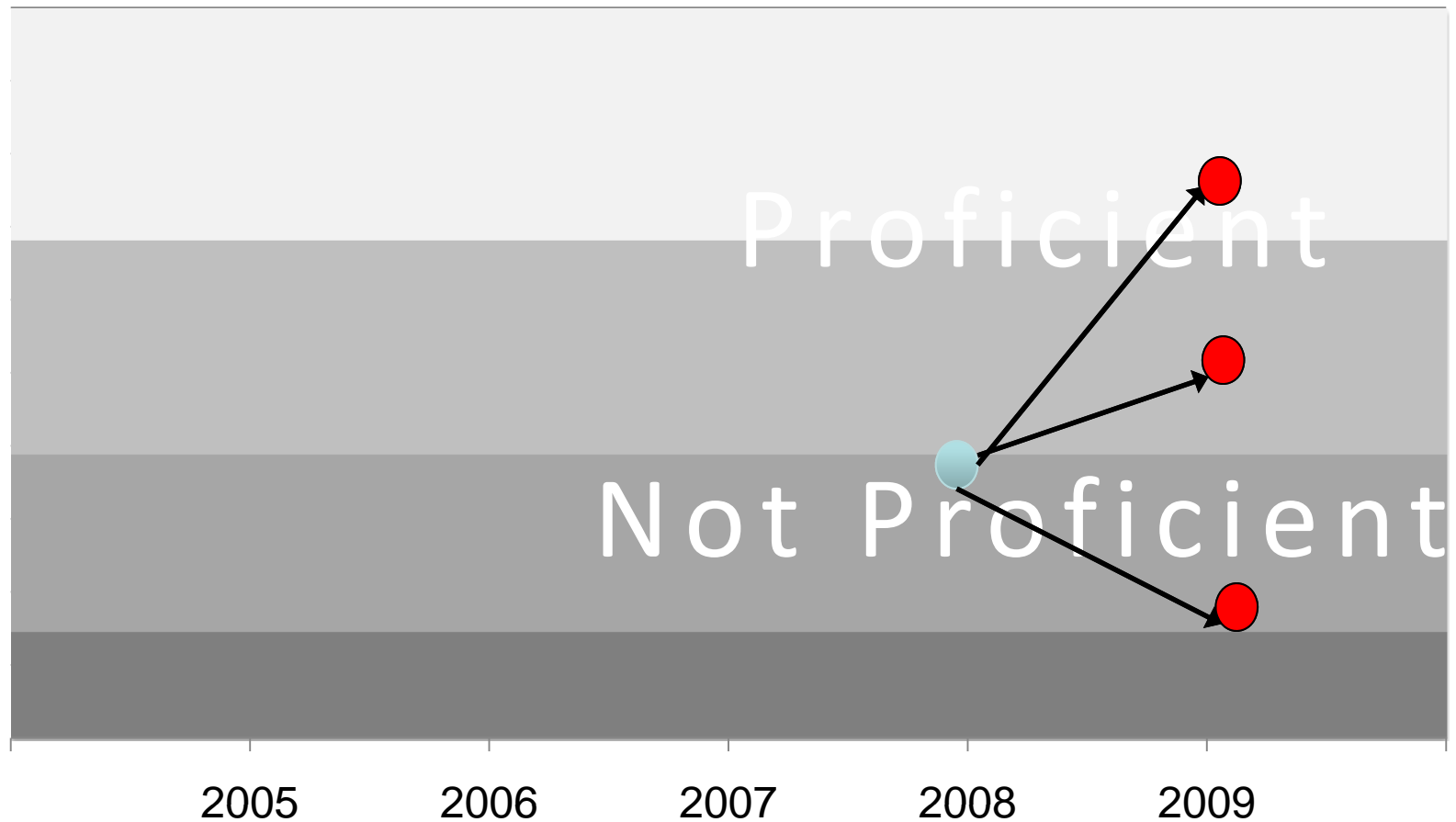




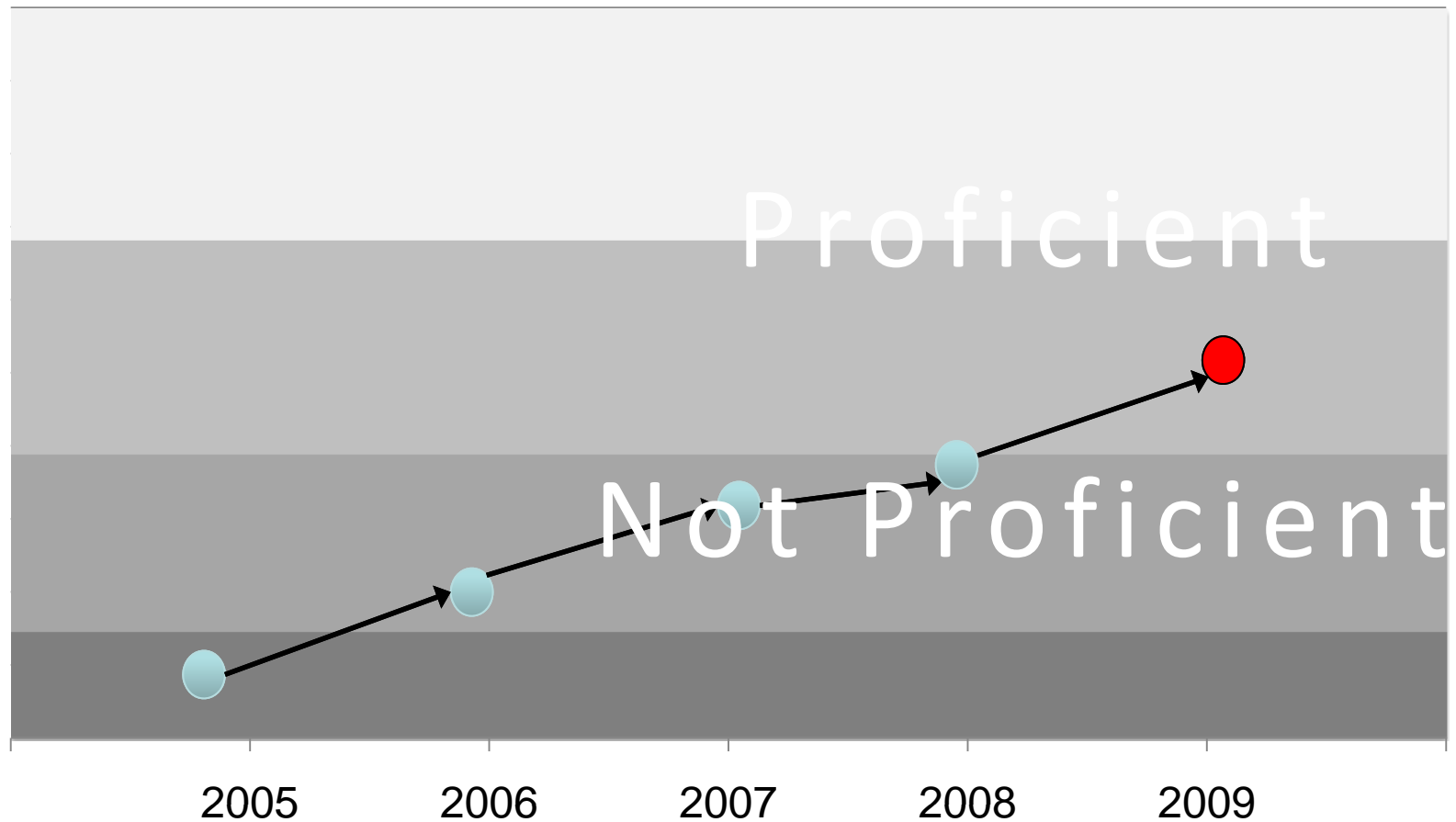
# Student growth percentile interpretations



# Student growth percentile interpretations



# Student growth percentile interpretations



# What is the Colorado Growth Model and how is it different from other growth models?

- Growth as an interpretation of current year score: Is it expected, or unusual? (**change**)
- Regression model using only prior scores as variables (no demographics in model, only used post hoc)
- Percentiles of growth – a normative measure based on academic peers (not a cohort group)
- Different from other growth models because it is normative at its base and produces individual interpretations

## How are student growth percentiles interpreted?

- At individual level – in comparison with academic peers
- At district, school, other groups – median
- Used for accountability calculations as well as less high stakes interpretations

# How are the data displayed and made available to stakeholders?

- Online application (“public” and “private” versions)
- Individual student reports (provided to parents through districts)
- School and district growth summary reports
- Raw and aggregated data available in files

How can a normative growth model support criterion-referenced interpretations?

- Using the growth model's knowledge to predict likelihood of future scores – the concept of catching up/keeping up/moving up

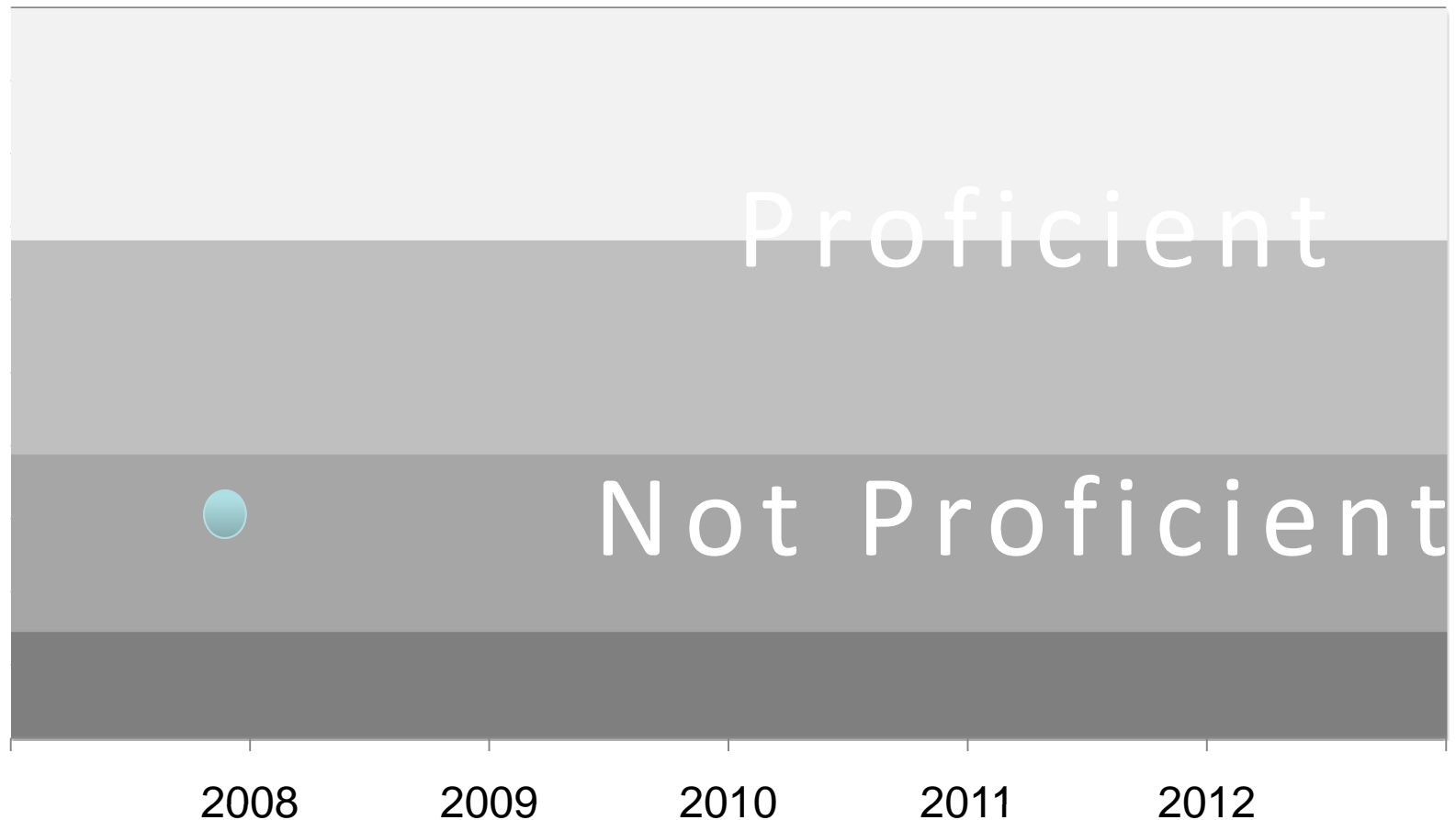
(Being on track to attain or maintain proficiency)

# The Colorado Growth Model is open source

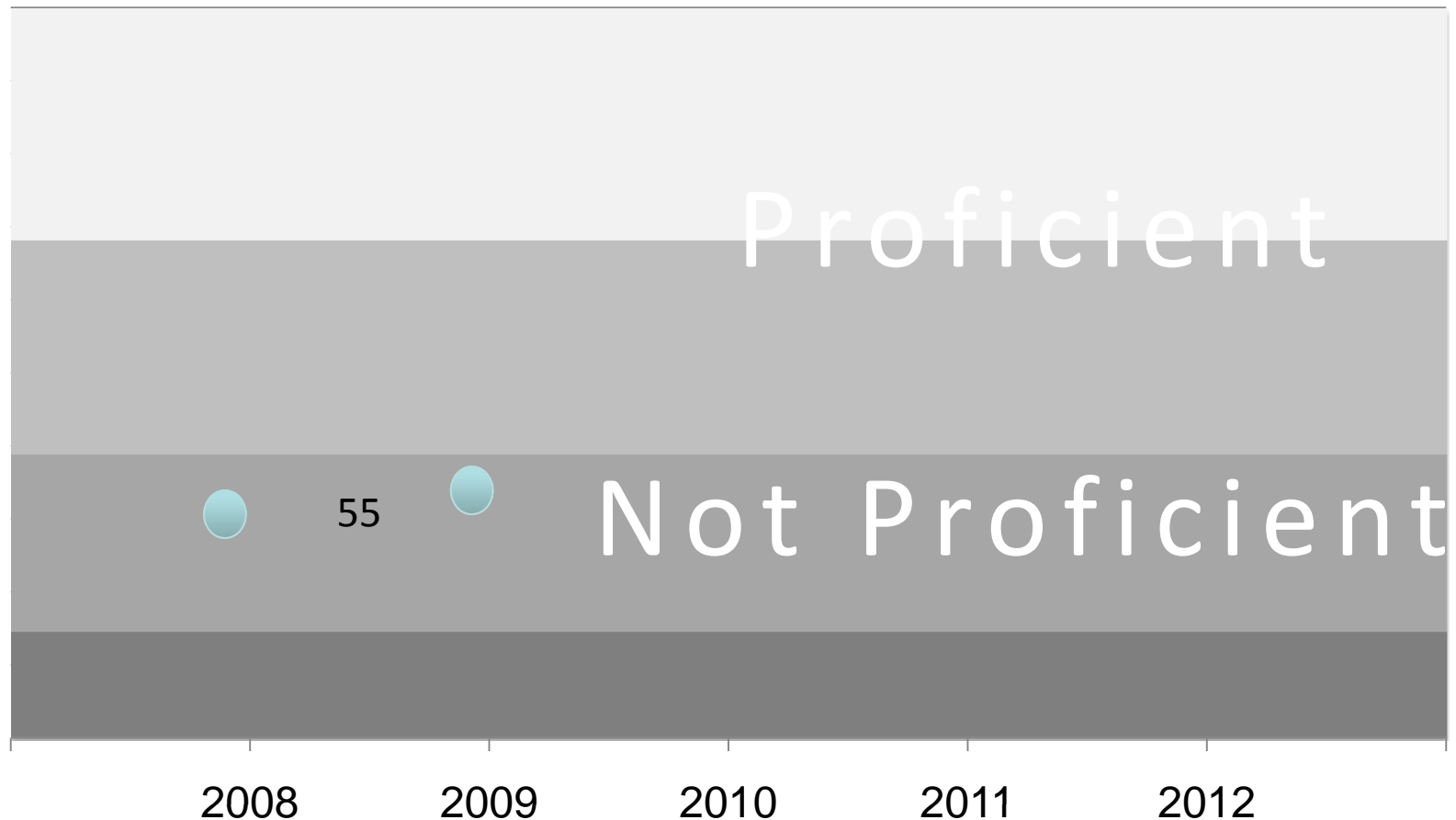
- Three other states have adopted its calculation method (Arizona, Massachusetts, Indiana) using the open source R package
- Several others are considering its adoption
- We are spearheading the building of the web application to enable the display of multiple states' data



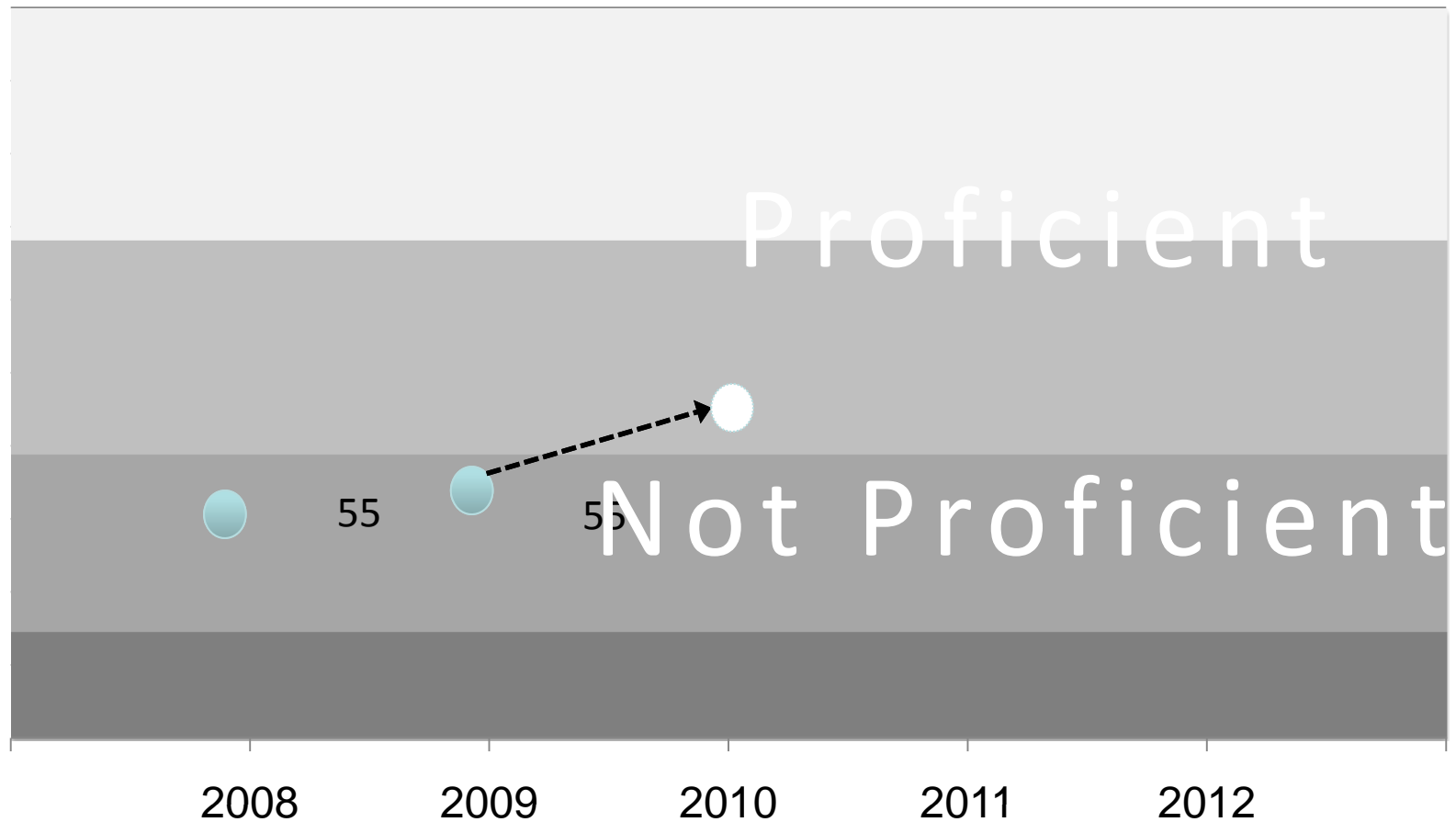
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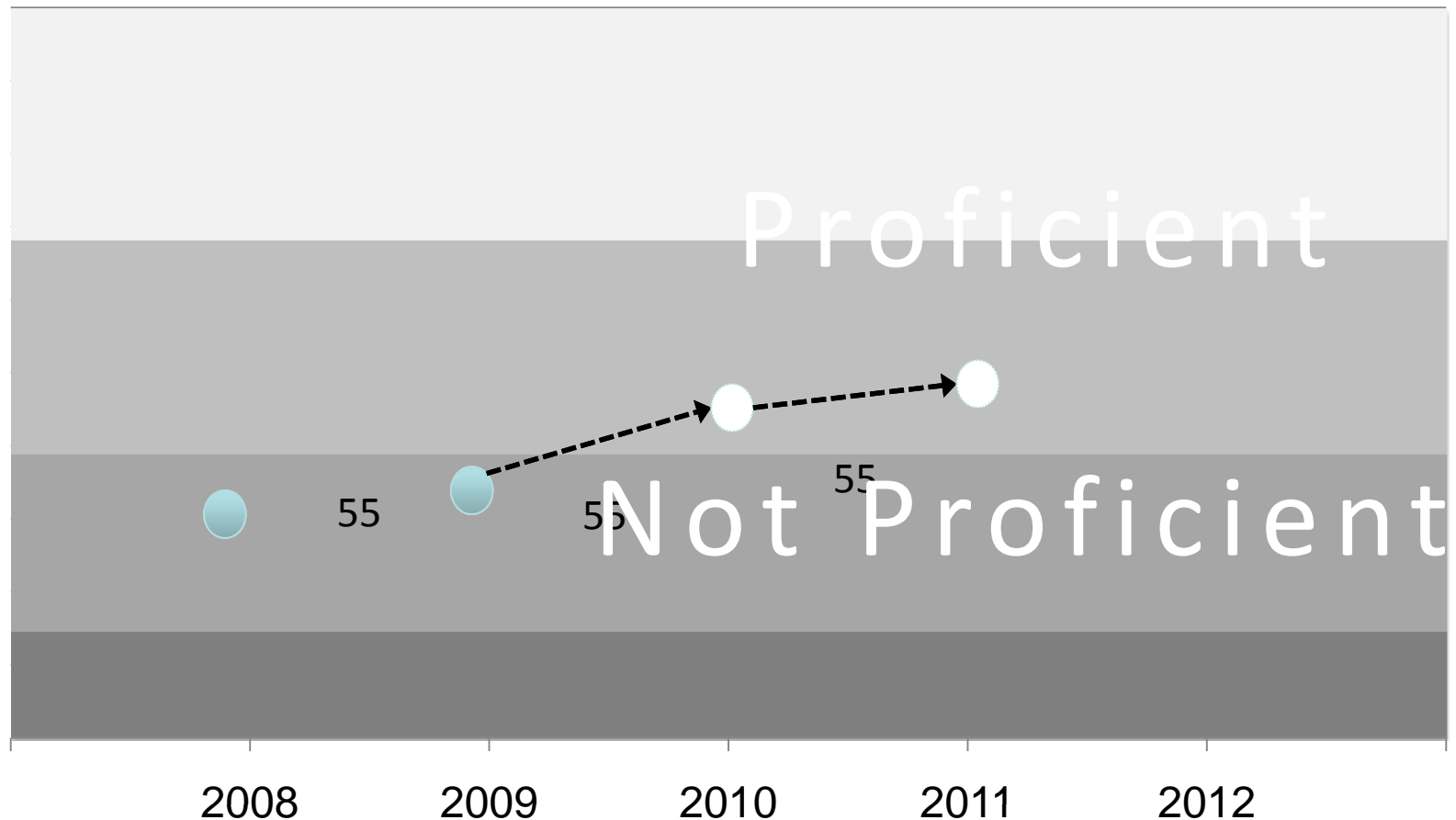
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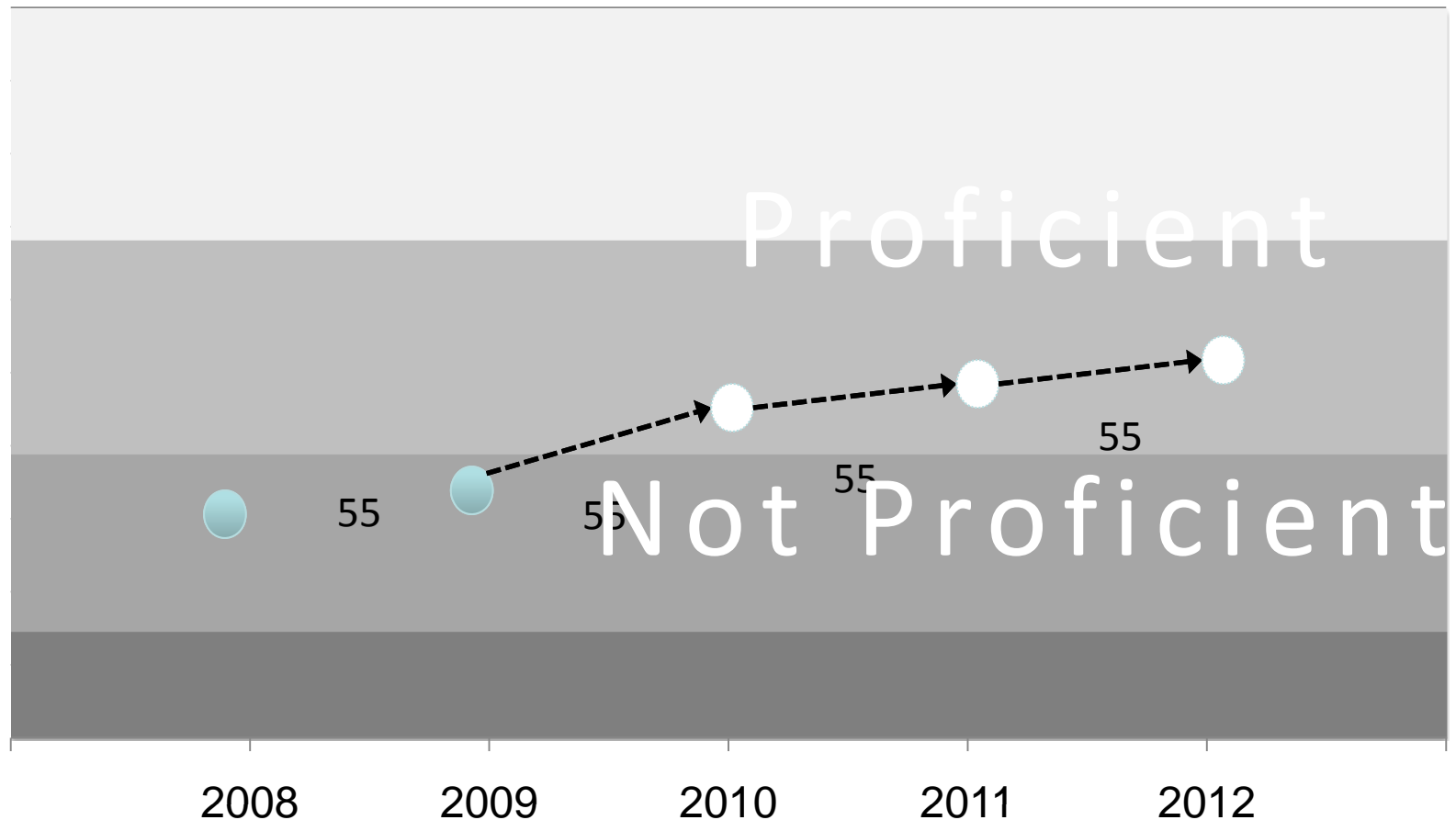
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# Proposed Colorado School Performance Framework and Growth

- Legislation requires CDE to create a unified approach to accountability based on four Key Performance Indicators: Status, Growth, Gaps, and Postsecondary Readiness
- Combined growth measure of MGP (normative growth) and “target” MGPs (growth to standard)

## Combining normative and criterion growth

Growth Gaps for FRL, Minority, IEP, Proficiency Level too!	Made Target?	
	Yes	No
MGP	60-99	70-99
	45-60	55-70
	30-45	40-55
	1-30	1-40

DRAFT – This is one possible set of cuts among many others

# PD efforts

- In person for a large number of district representatives, state dept. staff
- Online resources in [SchoolView.org](http://SchoolView.org)
- New online courses planned



# For more information

- <http://www.schoolview.org>
- <http://cde.state.co.us/research>
- E-mail me at [bonk\\_w@cde.state.co.us](mailto:bonk_w@cde.state.co.us)